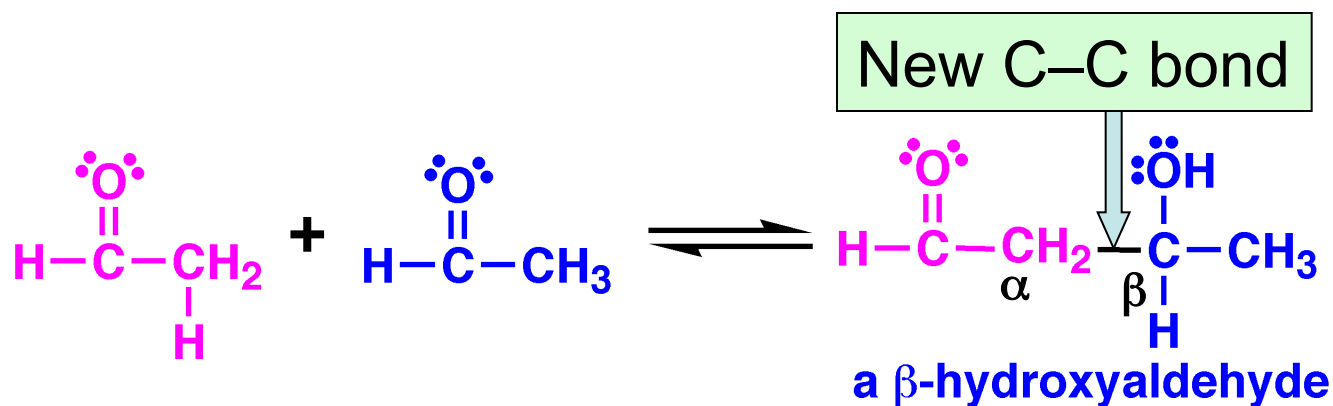
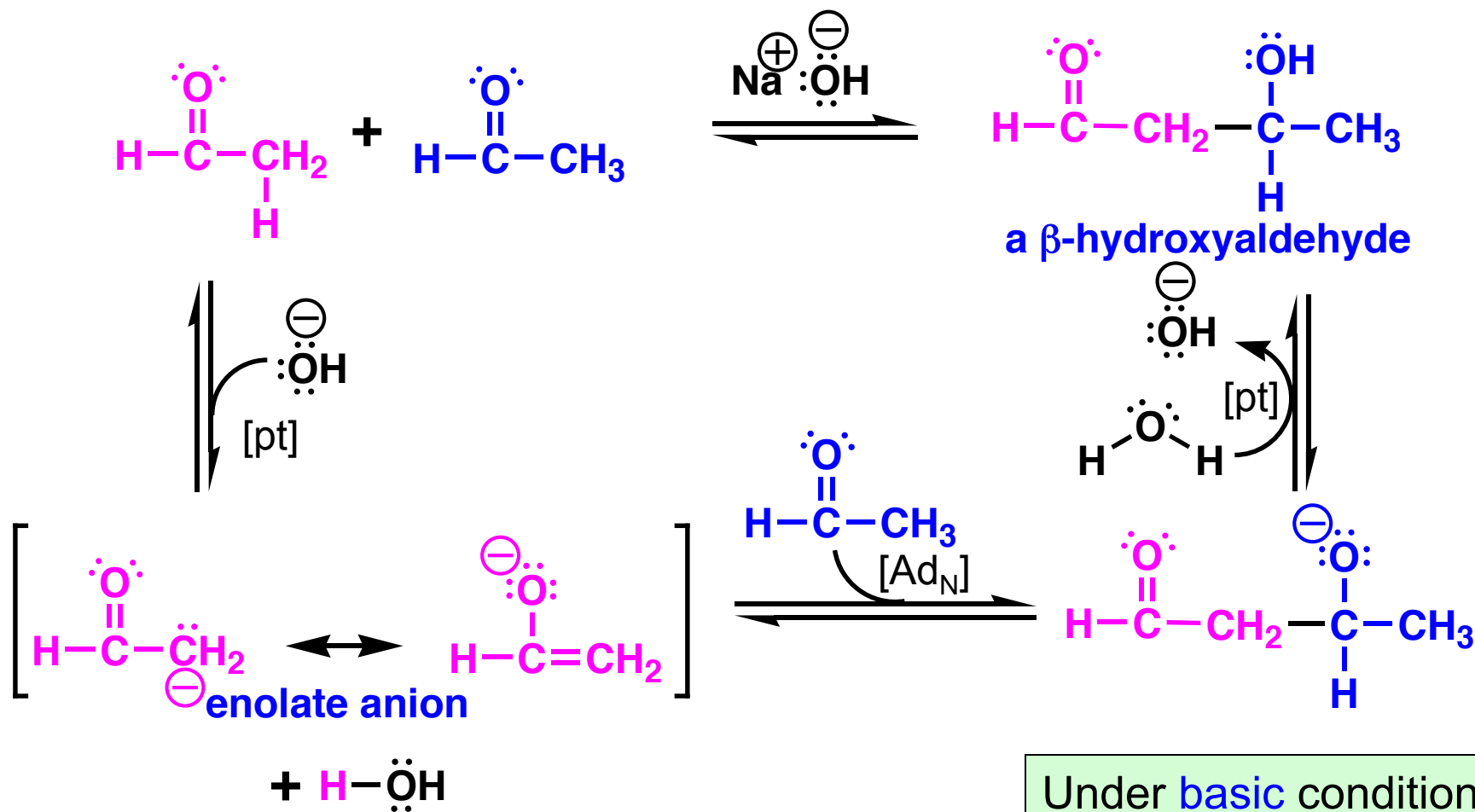


The Aldol Addition Reaction

In this reaction, two molecules of an aldehyde or ketone combine to produce a β -hydroxycarbonyl. One molecule serves as the nucleophile (enol or enolate) and the other is the electrophile which undergoes carbonyl addition. The reaction is acid or base catalyzed.

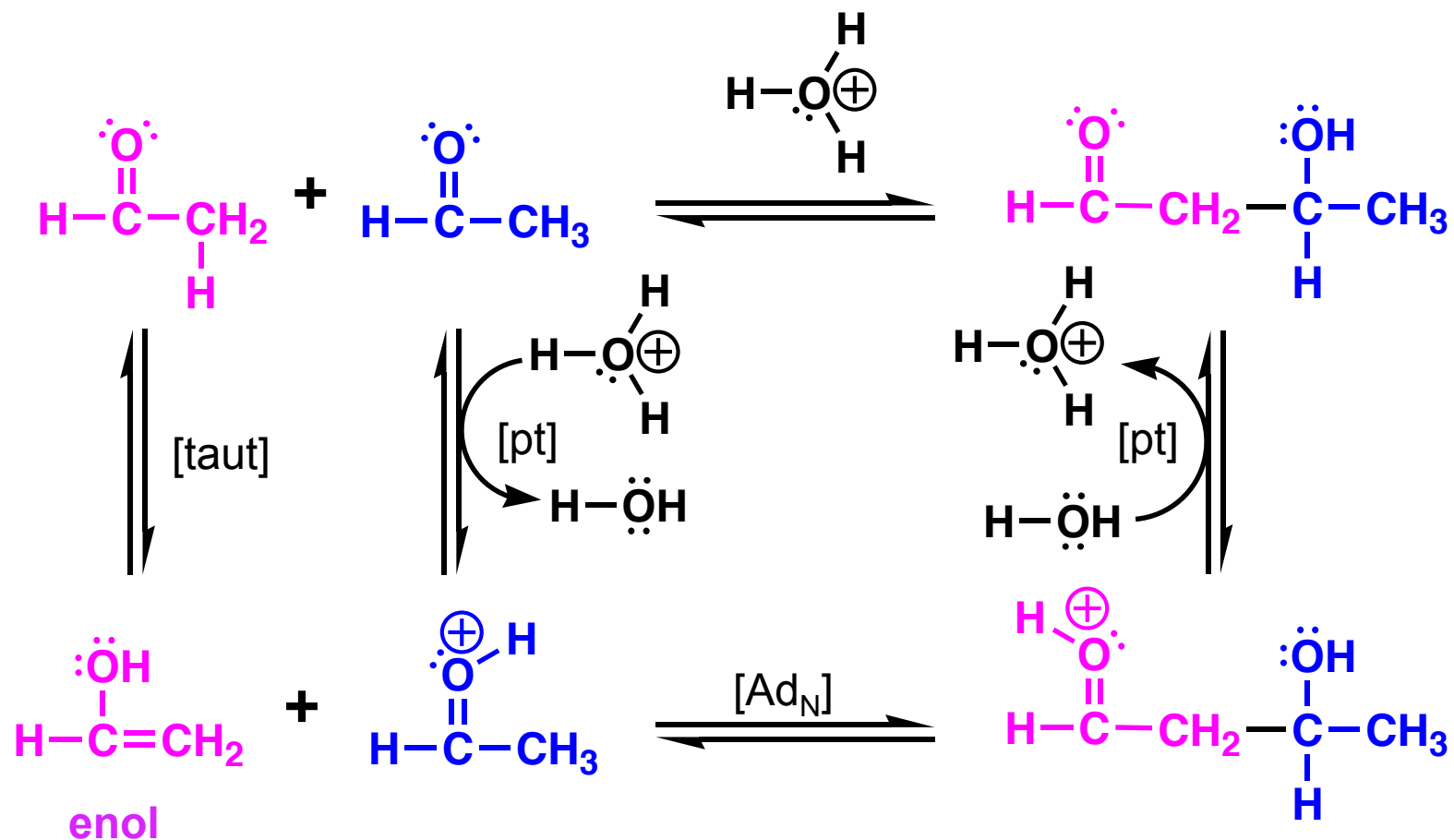


Base-Catalyzed Aldol Addition



Under basic conditions the intermediates bear negative charges

Acid-Catalyzed Aldol Addition



Under **acidic** conditions
the intermediates bear
positive charges